

IN THE CLAIMS:

1. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a gate electrode over a substrate;

forming a gate insulating film over the gate electrode;

forming a semiconductor film over the gate insulating film;

covering a region to become a channel formation region of said semiconductor film with a first mask; [[and]]

doping a region to become a source region [[or]] and a region to become a drain region of said semiconductor film with a trivalent or pentavalent impurity element; and

covering a portion of the first mask and either one of a portion of the region to become the source region [[or]] and a portion of the region to become the drain region with a second mask,

wherein the other one of the region to become the source region and the region to become the drain region is not covered with the second mask.

2. (Cancel).

3. (Previously Presented) A method according to claim 1 wherein contaminants on a surface of the substrate on which said semiconductor film is to be formed are reduced using active hydrogen or a hydride.

4. (Original) A method according to claim 1 further comprising the step of forming a multi-layer film including a silicon nitride film as any of the layers as said gate insulating film.

5. (Original) A method according to claim 1 further comprising the step of forming a multi-layer film including benzocyclobutene as a part of said gate insulating film.

6. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a gate electrode over a substrate;

forming a gate insulating film over the gate electrode,

forming a semiconductor film over the gate insulating film;

forming an insulating film over the semiconductor film;

crystallizing said semiconductor film by irradiating it with infrared light or ultraviolet light through said insulating film to form a crystalline semiconductor film; and

covering a region to become a channel formation region of said crystalline semiconductor film with a first mask; [[and]]

doping a region to become a source region [[or]] and a region to become a drain region of said crystalline semiconductor film with a trivalent or pentavalent impurity element through said insulating film;

covering a portion of the first mask and either one of a portion of the region to become the source region [[or]] and a portion of the region to become the drain region with a second mask; and

forming an interlayer insulating film over the first mask and the second mask,
wherein the other one of the region to become the source region and the region to become the drain region is not covered with the second mask.

7. (Currently Amended) A method for manufacturing a semiconductor device according to claim 6 wherein said gate insulating film, said initial semiconductor film and said insulating film are formed using different chambers.

8. (Currently Amended) A method for manufacturing a semiconductor device according to claim 6 wherein said gate insulating film, said semiconductor film and said insulating film are formed using the same chamber.

9. (Currently Amended) A method for manufacturing a semiconductor device according to claim 6 wherein said gate insulating film and said insulating film are formed

using a first chamber and wherein said semiconductor film is formed using a second chamber.

10. (Currently Amended) A method according to claim 6 further comprising the step of retaining a catalytic element for promoting the crystallization of silicon in contact with the surface of said semiconductor film or within said film after said step of forming the gate insulating film and the semiconductor film.

11. (Currently Amended) A method according to claim 6 wherein contaminants on a surface of the substrate on which said initial semiconductor film is to be formed are reduced using active hydrogen or a hydride.

12. (Original) A method according to claim 6 further comprising the step of forming a multi-layer film including a silicon nitride film as any of the layers as said gate insulating film.

13. (Original) A method according to claim 6 further comprising the step of forming a multi-layer film including benzocyclobutene as a part of said gate insulating film.

14. (Previously Presented) A method according to claim 1, wherein the second mask includes a material selected from a group consisting of a positive type photosensitive organic material or negative type photosensitive organic material, organic resin, a silicon oxide, a silicon nitride and silicon nitride oxide.

15. (Previously Presented) A method according to claim 6, wherein the second mask includes a material selected from a group consisting of a positive type photosensitive organic material or negative type photosensitive organic material, organic resin, a silicon oxide, a silicon nitride and silicon nitride oxide.

16. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film over a substrate;
covering a portion of a channel formation region of the semiconductor film and
~~either one of~~ a portion of a region to become a source region [[or]] and a portion of a region
to become a drain region of the semiconductor film with a mask;
doping the region to become the source region [[or]] and the region to become the
drain region of the semiconductor film with a trivalent or pentavalent impurity element; and
forming an interlayer insulating film over the mask,
wherein the other one of the region to become the source region and the region to
become the drain region is not covered with the mask.

17. (Previously Presented) A method according to claim 16, further comprising
the step of forming an insulating film over the semiconductor film.

18. (Previously Presented) A method according to claim 16, wherein the mask
includes a material selected from a group consisting of a positive type photosensitive organic
material or negative type photosensitive organic material, organic resin, a silicon oxide, a
silicon nitride and silicon nitride oxide.